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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,624	03/17/2004	Zachary C. Williams	7784-000982	4801

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EXAMINER

CRAIG, DWIN M

ART UNIT	PAPER NUMBER
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2123

MAIL DATE	DELIVERY MODE
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01/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,624	Applicant(s) WILLIAMS ET AL.	
	Examiner Dwin M. Craig	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/29/2007 has been entered.

2. Claims 25 and 26 have been presented in view of Applicants' arguments and amended claims language, claims 27-44 have been presented for examination.

Response to Arguments

3. Regarding the previously applied 35 U.S.C. 112 rejections of claims 25 & 26, those rejections are hereby withdrawn in view of Applicants' amended claim language.

3.1 Regarding the previously applied prior art rejections under 35 U.S.C. 103(a) to claims 25 & 26, those rejections are considered moot in view of Applicants' amended claim language.

3.2 An updated search based on Applicants' amended claim language and newly presented claims has revealed new art.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 25-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4.1 Claims 25-32 are rejected because it is unclear if the Applicants' are attempting to claim the apparatus, i.e. the processor and memory or the method of using the apparatus.

MPEP section 2173.05 section II clearly states:

"A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. *> IPXL Holdings v. Amazon.com, Inc., 430 F.2d 1377, 1384, 77 USPQ2d 1140, 1145 (Fed. Cir. 2005);< Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) *>(< claim directed to an automatic transmission workstand and the method * of using it * held ** ambiguous and properly rejected under 35 U.S.C. 112, second paragraph>)<. Such claims *>may< also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. at 1551."

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 25-32 are rejected under 35 U.S.C. 101 because the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of

invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only, see MPEP section 2173.05.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 25-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,748,304 to Felke et al. in view of U.S. Patent 6,725,184 to Gadh et al. and in further view of

Water Pump Replacement Info, <http://www.abnormal.com/~thogard/vw/h2opump.html> hereafter referred to as *thogard*.

6.1 Regarding independent claims 25, 33 and 38 and using independent claim 25 as an example, *Felke et al.* teaches, *an apparatus for facilitating the management of costs associated with performing a plurality of processes to manufacture, service and/or maintain an aerospace system, incorporating a plurality of physical components, the apparatus comprising a processor and memory configured to: represent each process as a set of performable operations; associate each operation with a cost of performing the operation; receive a user selection of an operation performable in the first of the processes; (Figures 1 & 2 and the descriptive text, regarding the limitation to service or maintain an aerospace systems see Col. 1 lines 10-31 more specifically, "Examples of such complex systems include factories, major buildings, ocean-going vessels, power generation plants, and aircraft to name a few..." see also Col. 1 lines 50-67, regarding associating a cost of performing an operation see Col. 6 lines 44-60 and Col. 10 lines 28-67 also service is functionally the same as repair which is disclosed Col. 12 lines 43-21)*

However, *Felke et al.* does not expressly disclose, *determine whether the selected operation is a duplicate of another operation performable in the first process and/or performable in a second of the processes; and based on the determination, notify the user as to a possible reduction of costs by elimination of a duplicate performance of the selected operation.*

Gadh et al. suggests *determine whether the selected operation is a duplicate of another operation performable in the first process and/or performable in a second of the processes; and based on the determination, notify the user as to a possible reduction of costs by elimination of a duplicate performance of the selected operation, (that while performing complex assembly of*

aerospace systems that the sequence in which the assembly is performed must be analyzed in order to determine the correct disassembly ordering and having to take into account assembly conditions and precedence conditions see Col. 2 lines 38-62 and Figure 20 and Col. 23 lines 7-41 and Col. 22 lines 39-63 which clearly suggest that disassembly of components in an aerospace system, in this case an airplane engine, that the order or the *precedence conditions* need to be accounted for, in other words when taking apart a complex mechanical assembly there is a cost associated with performing the assembly in the most efficient and cost effective manner. It is noted that notification to the user is clearly disclosed in both references, in *Gadh et al.* teaches Figure 12 which is clearly a GUI).

Both *Felke et al.* and *Gadh et al.* are from the same problem solving area of repair, assembly and maintenance of aerospace systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have eliminated un-needed duplicate steps in a maintenance or repair procedure.

The suggestion for doing so would have been to reduce costs associated with performing a repair, see Col. 23 lines 28-41 of *Gadh et al.* further and in regards to the knowledge of an artisan of ordinary skill, clearly the knowledge that when performing a maintenance action on a mechanical system that, if during the course of performing the repair and artisan would recognize an opportunity to perform another repair if the situation accommodates that repair, for example, when having to replace a timing belt on a car an artisan of ordinary skill would know to also replace the other "belts" on the front of the engine as well as replace the "water pump" see the pages of *thogard*.

Therefore, it would have been obvious to combine *Gadh et al.* with *Felke et al.* to obtain the invention as specified in claims 25-44.

6.2 Regarding dependent claims 26, 34, 37 and 39 and using claim 26 as an example, *Felke et al.* does not expressly disclose, *identifying one or more operations dependent on performance of the selected operation; and notifying the user as to costs associated with the identified dependent operations*, however *Gadh et al.* teaches, (precedence conditions see Col. 2 lines 38-62).

6.3 Regarding claims 27 and 40 and using claim 27 as an example, *Felke et al.* teaches, *identify a mandatory operation performable downstream of the selected operation; and notify the user as to the costs associated with the mandatory operation* (Figure 3 more specifically item # 313 and the descriptive text, see also Col. 10 lines 28-67 and Col. 11 lines 1-58).

6.4 Regarding claims 28, 29, 35 and 42 and using claim 28 as an example, *Felke et al.* teaches, *modifying one(two) or more representation of one(two) or more processes based in user input* (Figure 1 more specifically items 119 and the descriptive text embodied in *Felke et al.* regarding user input and multiple processes, see also Figure 2, note the list of multiple processes, items 205, 207, 209, 211 and 213, see the descriptive text regarding the embodiment).

6.5 Regarding claims 30 and 43, *Felke et al.* teaches an *aerospace vehicle* (Figure 1 items 123 and 101).

6.7 Regarding claims 31 and 44 *Felke et al.* teaches, *one or more locations for performing the selected operation* (Figure 2, note the list of multiple processes, items 205, 207, 209, 211 and 213, see the descriptive text regarding the embodiment, it is noted that supply lines, and pumps and igniters are in different locations on the aircraft) further *Gadh et al.* clearly teaches different

locations on the aircraft (Figures 3 and 12-22 and the descriptive text regarding these embodiments).

6.8 Regarding claim 32 *Felke et al.* does not expressly disclose, *to represent each process as a set of sequential operations* however *Gadh et al.* teaches, Figures 1-10 and the descriptive text, note in Figure 8 the phrase “disassembly sequence”.

6.9 Regarding claims 36 and 41 and using claim 36 as an example, *Felke et al.* does not expressly disclose, *modifying a representation of a set of operations that includes the selection operation, the modifying performed based on input from the user* however, *Gadh et al.* teaches Figures 12-23 and the descriptive text.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

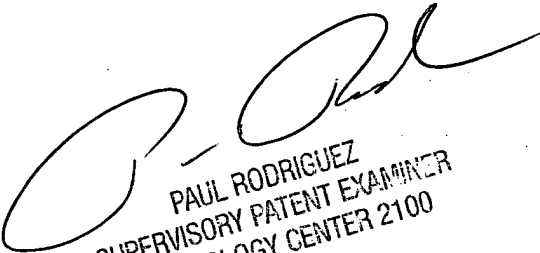
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dwin McTaggart Craig
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